

Editors' Corner-Vol.3

The May-June issue of FERMAT contains a wide variety of contributions that come in many different flavors.



ARTICLES

In the Articles section you will find:

- An excellent review paper on Macro-basis functions by Craeye and his coauthors from Sweden, Spain and the U.S.
- A contribution on very practical and contemporary topic of fast data acquisition and through-wall imaging by Hoorfar and his colleagues from Villanova University, and Duke University.
- An article contributed by Zhang and his colleagues from NTU in Singapore on a topic of great interest to the millimeter wave community, which is a very up-and-coming area, as we all know. It discusses SPST switches in the context of 65-nm CMOS technology.
- Next, we have a classical problem of Shielding by Spherical shells, revisited by Tesche, who has a long history of working with the U.S. Air Force as a Consultant.
- A very comprehensive coverage of the topic of Antennas for 4G LTE bands in Handheld Terminals by Cyril Luxey and his colleagues from LEAT, Nice.
- The topic of Metal-mountable RFID tags discussed by a group of authors hailing from Tampere University of Technology in Finland, and UCLA.



MULTIMEDIA

The Multimedia Section of this issue features 11 contributions covering a wide spectrum, not only in terms of frequency, but also in terms of areas of interest. They are:

- On The Birth Of Wireless Telephony
- Recent Research on Antennas for Wireless in Australia

- Cable television transmission over a 1550-nm infrared indoor optical wireless link (Video)
- Asynchronous indoor positioning system based on visible light communications (Video)
- Metamaterials and Metasurfaces: Principle, Structure, Functionality, and Application
- Analysis of NURBS Dielectric Volumes by Using the Method of Moments
- Characteristic Basis Function Analysis of Large Aperture-Fed Antenna Arrays
- Mixed LEGO-EFIE Approach for the Analysis of Radiating Elements and Anisotropic Media
- A Comparison of Domain Decomposition Techniques for Analysing Disjoint Finite Antenna Arrays
- Application of the Characteristic Basis Function Method (CBFM) on a Non-Uniform Mesh to the Solution of Large-Size Dielectric Scattering Problems
- Including High-Frequency Surface Diffraction in a Hybrid FEBI-MLFMM-UTD Method
- Dielectric Resonator Nano Antennas: A Pathway to Efficient Optical Antennas

As you can see, many authors have chosen to contribute to FERMAT in the multimedia format, where they can use their PPT files as well as videos, when appropriate. Another feature which has drawn considerable attention of the reader is that FERMAT often publishes a set of PPTs from Special sessions in selected conferences. This time we have chosen EuCap'14 to be such a meeting, and in the last issue (March/April, Vol.2), it was iWAT'14 in Sydney. This is a unique approach to publishing, adopted exclusively by FERMAT, you will agree. We strongly encourage you to browse through these contributions and we feel certain that you will find a few things that would pique your curiosity and interest.



NEWS & VIEWS

Moving on to the News & Views section, this issue of FERMAT salutes one of the giants in the antenna field—none other than Peter Hall. Here you will also find an interesting presentation by Rautio, founder of Sonnet, who poses the question, “What is the de-embedding problem anyway?” To the best of my knowledge, de-embedding is a very thorny problem, which is yet an active area of research pursued by companies that market commercial simulation codes for microwave circuits.

Starting this issue, we are adding a new feature in FERMAT, publishing biographical notes under the heading of ‘Women in Engineering,’ and Ozgun from TED University in Turkey inaugurates this column.

We also have some announcements and other tidbits in this section that you might find interesting.



EDUCATION

Next, in the Education section, which is now being handled by Jayanti Venkataraman of Rochester Institute of Technology on behalf of FERMAT, you will find an informative article on Summer Training of EM students. If you want to weigh in on any of the issues pertaining to EM Education, please contact Jayanti through FERMAT, by sending her an email directly, or through FERMAT at rajmittra@ieee.org, mentioning FERMAT in the subject line.

One of the unique features of FERMAT, which separates it from other EM-type journals is that it encourages the readers to comment on the contributions, *after* they have been published. This is what makes FERMAT a dynamic publication, a feature that is not available elsewhere in similar journals. We encourage the readers to take advantage of this opportunity, and share their opinions with their colleagues. Please note that all comments are published anonymously, unless requested otherwise. The comments not only cover articles appearing in the previous issue (March/April, Vol.2), but also contain opinions of some readers on the ‘Metamaterial Antenna’ debate. Once again, we encourage all readers to comment on any of the contributions appearing in FERMAT, in all three volumes. We value of your opinion highly, and welcome you to participate in the blog by sending in your comments, not only on articles in FERMAT, but on any EM-related topic which suits your fancy. Please keep them coming—we’ll be waiting to hear from you!

- Comment on “Conversion of Whispering Gallery Mode to Dipole Mode,” by Iftikhar Ahmed, Eng Huat Khoo and Ching Eng Png
- Comment on “Electromagnetic Absorbers Based on Metamaterial and Plasmonic Devices,” by Christos Argyropoulos
- Comment on “Asymptotic Theory of Diffraction by Elongated Bodies—from V. A. Fock to Present,” by I. V. Andronov and R. Mittra
- Comment on “Efficient Analysis of Microwave Circuits/Printed Antennas and Scattering Problems via the Characteristic Basis Function Method (CBFM),” by Giacomo Bianconi and Raj Mittra
- Comment on “Volume Singular Integral Equation Method for Solving Problems of Diffraction of Electromagnetic Waves by a Dielectric Inhomogeneous Body in a Rectangular Waveguide,” by M. Yu. Medvedik., and Yu.G.Smirnov
- Comment on “Radiation Pattern Modeling with Characteristic Basis Function Patterns,” by André Young, Rob Maaskant, Marianna V. Ivashina, and David B. Davidson
- Comment on “Printed Antenna Designs Using Defected Ground Structures: A Review of Fundamentals and State-of-the-Art Developments,” by Debatosh Guha, Sujoy Biswas, and Chandrakanta Kumar

- Comment on “Evolution of Frequency Selective Surfaces,” by A. Mackay, B. Sanz-Izquierdo and E.A. Parker
- Comments on Metamaterial Antenna Debate and Related Topics

We close with a quote from a reviewer of an article, which we are currently processing for a forthcoming issue. In a note to the Editors, which he sent along with his review, he said: “Love the review philosophy, Raj. I hope FERMAT goes somewhere!” As you know FERMAT invites well-established authors to contribute to the Journal, asks the reviewer to suggest ways to improve the presentation and the readability of the paper, and requests them to do it quickly (typically within two weeks) rather than carry out a ‘traditional’ review, which we all know what that’s like. So far, we have received nothing but kudos about the editorial philosophy of FERMAT, and add that we too hope FERMAT ‘goes somewhere,’ to borrow the phrase from the above reviewer. So far the sailing has been smooth, thanks to the help from many friends and well-wishers of this new publishing venture. With your help, we will not only keep it up, but *go somewhere* good, we are sure.